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1. (Previously Presented) A culture of cells of an isolated strain derived from a pathogenic parent strain of a species of *Neospora*, wherein said cells exhibit attenuated pathogenicity compared to those of the parent strain, and said cells are temperature-sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal, and wherein said cells are capable of triggering an immune response that protects a mammal against neosporosis when administered as a live vaccine.

2. (Canceled)

<sup>3</sup> 3. (Original) The culture of claim 1, wherein the species of the parent strain is *N. caninum*.

<sup>3</sup> <sup>2</sup> 4. (Original) The culture of claim <sup>3</sup>, wherein the parent strain of *N. caninum* is NC-1 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL12231.

5. (Canceled)

<sup>4</sup> 6. (Previously Presented) A vaccine to protect for protecting a mammal against neosporosis, comprising a veterinarily acceptable carrier and an immunologically effective amount of live cells of an isolated strain derived from a pathogenic parent strain of a species of *Neospora*, which wherein said cells exhibit attenuated pathogenicity compared to those of the parent strain, and said cells are temperature-sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal, and wherein said cells but which are capable of triggering an immune response that protects the mammal against neosporosis when administered as a live vaccine, and a veterinarily acceptable carrier.

7.. (Canceled)

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5  
8. (Original) The vaccine of claim ~~6~~<sup>4</sup>, wherein the species of the parent strain is *N. caninum*.

6  
9. (Original) The vaccine of claim ~~8~~<sup>5</sup>, wherein the parent strain of *N. caninum* is NC-1 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL12231.

10. (Canceled)

7  
11. (Original) The vaccine of claim ~~6~~<sup>4</sup>, further comprising an adjuvant.

8  
12. (Previously Presented) The vaccine of claim ~~11~~<sup>7</sup>, wherein the adjuvant is an oil-in-water emulsion.

9  
13. (Currently amended) A method for preparing a culture of attenuated cells of a species of *Neospora* for use in a vaccine that protects a mammal against neosporosis, comprising modifying cells from a pathogenic parent strain of a species of *Neospora*; selecting and clonally propagating one or more modified cells that exhibit attenuated pathogenicity compared to cells of the parent strain, and that are temperature-sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal; and selecting and clonally propagating one or more attenuated cells which are capable of triggering an immune response that protects the mammal against neosporosis when administered in a live vaccine.

14. (Canceled)

10  
15. (Original) The method of claim ~~13~~<sup>9</sup>, wherein the species of the parent strain is *N. caninum*.

11  
16. (Original) The method of claim ~~15~~<sup>10</sup>, wherein the parent strain of *N. caninum* is NC-1 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL-12231.

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<sup>12</sup>  
~~17~~. (Currently amended) A method for preparing a vaccine to protect a mammal against neosporosis, comprising modifying cells from a pathogenic parent strain of a species of *Neospora*; selecting and clonally propagating those modified cells that exhibit attenuated pathogenicity compared to cells of the parent strain, that are temperature-sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal, and that are capable of triggering an immune response in the mammal that protects against neosporosis when administered in a live vaccine; and combining an immunologically effective amount of the attenuated cells with a veterinarily acceptable carrier in a form suitable for administration as a live vaccine to the mammal.

18. (Canceled)

<sup>13</sup>  
~~19~~. (Original) The method of claim <sup>12</sup>~~17~~, wherein the species of the parent strain is *N. caninum*.

<sup>14</sup>  
~~20~~. (Original) The method of claim <sup>13</sup>~~19~~, wherein the parent strain of *N. caninum* is NC-1 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL-12231.

<sup>15</sup>  
~~21~~. (Original) The method of claim <sup>14</sup>~~20~~, wherein the strain of attenuated cells is NCTS-8 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL-12230.

<sup>16</sup>  
~~22~~. (Original) The method of claim <sup>12</sup>~~17~~, further comprising adding an adjuvant to the vaccine.

<sup>17</sup>  
~~23~~. (Original) The method of claim <sup>16</sup>~~22~~, wherein the adjuvant is an oil-in-water emulsion.

<sup>18</sup>  
~~24~~. (Previously Presented) A method of vaccinating a mammal against neosporosis, comprising administering to the mammal an immunologically effective amount of a vaccine and a veterinarily acceptable carrier, wherein said vaccine comprises live cells of an isolated strain derived from a pathogenic parent strain of a species of *Neospora*, wherein said cells exhibit attenuated pathogenicity compared to those of the parent strain, and said cells are temperature-

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sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal, and wherein said cells are capable of triggering an immune response that protects the mammal against neosporosis.

25. (Canceled)

<sup>19</sup>  
26. (Original) The method of claim <sup>18</sup>~~24~~, wherein the species of the parent strain is *N. caninum*.

<sup>20</sup>  
27. (Original) The method of claim <sup>19</sup>~~26~~, wherein the parent strain of *N. caninum* is NC-1 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL-12231.

<sup>21</sup>  
28. (Original) The method of claim ~~27~~, wherein the strain of attenuated cells is NCTS-8 which is present in MARC145 monkey kidney cells having ATCC accession No. CRL-12230.

<sup>22</sup>  
29. (Original) The method of claim <sup>18</sup>~~24~~, wherein the vaccine further comprises an adjuvant.

<sup>23</sup>  
30. (Original) The method of claim <sup>22</sup>~~29~~, wherein the adjuvant is an oil-in-water emulsion.

<sup>24</sup>  
31. (Original) The method of claim <sup>18</sup>~~24~~, wherein the mammal is selected from the group consisting of dogs, cows, goats, sheep and horses.

<sup>25</sup>  
32. (Currently amended) A combination vaccine, comprising an immunologically effective amount of live cells of an isolated strain derived from a pathogenic parent strain of a species of *Neospora*, wherein said cells exhibit attenuated pathogenicity compared to those of the parent strain, and said cells are temperature-sensitive and exhibit a reduced growth rate at the body temperature of said mammal compared to a temperature lower than the body temperature of said mammal, and wherein said cells are capable of triggering an immune response that protects the mammal against neosporosis when administered as a live vaccine; together with one or more antigens other than a *Neospora* antigen that trigger an immune response that protects the

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mammal against a disease or a pathological condition, and a veterinarily acceptable carrier.

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